

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 2851

"Version with Markings to show Changes Made"

In the Claims:

- Claim 1: A reticle with support material of transparent, optically uniaxial crystal, in which the principal axis of said crystal is substantially perpendicular to the surface of said reticle.
- Claim 2: A reticle based on MgF_2 as support material, in which the principal axis of said MgF_2 is oriented substantially perpendicular to the surface of said reticle.
- Claim 4: The reticle according to claim 1, further comprising a cooling device.
- Claim 5: The reticle according to claim 4, in which said cooling device has a flowing fluid.
- Claim 7: The reticle according to claim 2, further comprising a cooling device.
- Claim 8: An illumination equipment for microlithography comprising:
an illumination system, and
a reticle with magnesium fluoride as support material,
in which said illumination system provides radially polarized light and said magnesium fluoride is oriented with its crystal principal axis substantially in the direction of the optical axis at said reticle.
- Claim 9: An illumination equipment for microlithography comprising:
an illumination system,
a reticle with support material of transparent optically uniaxial crystal,
in which said illumination system provides radially polarized light and said support material is oriented with its principal axis substantially in the direction of the optical axis at said reticle.

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- Claim 10: The illumination equipment according to claim 8 or 9 with a cooling device with a flowing fluid.
- Claim 11: The reticle according to claim 18, further comprising a fluid cooling system.
- Claim 13: The reticle according to claim 19, in which said flat plate comprises crystal.
- Claim 14: The reticle according to claim 13, in which said crystal comprises one of CaF_2 and MgF_2 .
- Claim 15 (Amended three times): A pellicle consisting of fluoride crystal.
- Claim 16: The pellicle according to claim 15, comprising a fluoride selected from the group consisting of CaF_2 , BaF_2 , or MgF_2 .
- Claim 17: A reticle with support material of transparent, optically uniaxial crystal, in which the principal axis of said crystal is oriented perpendicular $\pm 5^\circ$ to the surface of said reticle.
- Claim 18: A reticle based on MgF_2 as support material, in which the principal axis of said MgF_2 is oriented perpendicular $\pm 5^\circ$ to the surface of said reticle.
- Claim 19: An illumination equipment for microlithography comprising:
an illumination system,
a reticle with an optical axis and support material of transparent optically uniaxial crystal,
wherein said illumination system provides radially polarized light and said support material is oriented with its principal axis substantially in the direction of said optical axis at said reticle,

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further comprising at least one flat plate arranged parallel at said reticle, in which
a fluid flows between said reticle and said at least one flat plate.
a reticle with an optical axis and support material of transparent optically uniaxial
crystal,
wherein said illumination system provides radially polarized light and said
support material is oriented with its principal axis substantially in the direction of
said optical axis at said reticle,
further comprising at least one flat plate arranged parallel at said reticle, in which
a fluid flows between said reticle and said at least one flat plate.

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Remarks

The present invention recites fluoride as the structure material of a pellicle. In Kubota the structural material consists of organic material. Both will need some antireflection coating. The "Discussion of Relevant Art" on page 2, lines 4-16 of the present specification recites JP-A 4-081756, which discloses CaF_2 coatings. This reference, as well as Kubota, clearly are not a pellicle of CaF_2 . Both are only "made with" inter alia - CaF_2 .

We have introduced the wording of page 4, lines 12-13 of the specification into claim 15: "A pellicle consisting of fluoride crystal". Claim 16 already recites a pellicle comprised of a fluoride selected from... CaF_2 . Thus a further search is not needed.

Wherefore, further consideration and allowance of the claims as amended is respectfully requested.

A one-month extension of time in which to respond to the outstanding Office Action is hereby requested. Credit Card Payment Form PTO-2038 is enclosed to cover the prescribed Large Entity one-month extension fee of \$110.00. Please charge any additional fees or credit any overpayments to Deposit Account 11-0665. A duplicate of this page is enclosed for this purpose.

Respectfully submitted,



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